



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI PROCUREMENT OPERATIONS DIVISION
CINCINNATI, OHIO 45268**

SUBJECT: Request for Task Order Proposal, Tracking Number PR-R3-18-00083

FROM: Katie Rechenberg
Contracting Officer

TO: Multiple Award Contract Holders under TSWAP

Attached is request for task order proposal for the subject tracking number which is issued for competition for the project entitled, "Chesapeake Bay TMDL Watershed Implementation Plan and Modeling Support."

The government requests you prepare a proposal (cost and technical) for the task order. Request the proposals be submitted to Katie Rechenberg by 12:30pm, Friday, February 20, 2018 via FedConnect. Proposals shall also include the required conflict of interest certification.

The technical proposal is limited to 10 pages or less. The cost proposal shall be provided in accordance with Contract Clause B-1 as supplemented by the attached cost proposal instructions. Any information on pages beyond the page number limitation will not be considered or evaluation. For planning purposes, it is anticipated that this work would commence on/or around April 1, 2018.

The following documents provided for this solicitation will become part of the Task Order Award:

- Performance Work Statement
- Task Order Clauses

Award of a Cost Plus Fixed Fee – Term Type task order will result. The period of performance for this Task Order is a base period of twelve (12) months plus three (3) option periods of twelve (12) months with one (1) option period of four (4) months. Please see attached technical evaluation criteria which will be used to evaluate the offer. Award will be made will be to the offeror whose proposal represents the best value to the Government, where Technical Quality is more important than cost.

Award is intended to be made without discussions. Negotiations will be conducted only if determined necessary.

Any questions should be directed to the undersigned within five days of issuance of this Solicitation.

 ELECTRONIC
SIGNATURE

Katie Rechenberg
Contracting Officer

**PEFORMANCE WORK STATEMENT
TSAWP CONTRACT
PR-R3-18-00083**

A. TITLE: Chesapeake Bay TMDL Watershed Implementation Plan and Modeling Support

B. PERIOD OF PERFORMANCE: From date of award a base period plus four (4) option periods

**C. TASK ORDER
COR (TOCOR):**

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D. BACKGROUND & OBJECTIVES

Background

As part of the Chesapeake Bay Total Maximum Daily Load (TMDL) the seven watershed jurisdictions of Delaware, the District of Columbia, Maryland, New York, Pennsylvania, Virginia, and West Virginia will develop Phase III Watershed Implementation Plans (WIPs) in the 2017-2019 timeframe to lay out a course of action for achieving the Chesapeake Bay Program Partnership's (Partnership) 2025 goals for putting the necessary practices in place to restore Chesapeake Bay water quality to levels achieving water quality standards. The U.S. Environmental Protection Agency (EPA) is seeking contractor assistance with the tasks described below to support work on Phase III WIP development and implementation, which includes support to state and local partners in deciding how to cost-effectively implement the pollutant load reductions called for in their jurisdictions' WIPs.

Objectives

The Partnership has recently completed the Chesapeake Bay TMDL 2017 midpoint assessment, which gathered input and data on priorities identified by the Partnership to inform refinements to the Phase 6 suite of modeling tools and to inform development and implementation of the Phase III WIPs. The Phase III WIPs provide the jurisdictions with the opportunity to update their long-term strategies in light of implementation experiences through 2017; incorporate findings from the midpoint assessment; and to further engage their local, regional, and federal partners. There are several midpoint assessment strategic issues that will inform the development of the Phase III WIPs, such as climate change

considerations, the development of local planning goals, refinements to the Phase 6 suite of modeling tools, and the use of monitoring data to explain water quality trends.

EPA, the seven watershed jurisdictions, along with their federal agency partners, will also continue to monitor progress towards meeting the Chesapeake Bay TMDL load reductions utilizing the existing accountability framework. This accountability framework, described within the 2010 Chesapeake Bay TMDL (see Section K, “References”) includes documentation on the jurisdictions’ WIPs, two-year milestones by jurisdictions and federal agencies, annual BMP progress reporting and tracking, and federal actions, if needed. As part of this effort, the Partnership will need to continue to review how to simulate the nutrient and sediment controls associated with various best management practices (BMPs) using the suite Chesapeake Bay Program modeling tools. The Chesapeake Bay Program’s (CBP’s) Water Quality Goal Implementation Team (WQGIT) and its workgroups have and will continue to convene a series of expert panels to conduct these reviews and develop recommendations.

E. TASKS

The contractor shall provide support through the below tasks in the Base Period and in each Option Period. Written technical direction will be utilized to provide further detail on specific work included in the Performance Work Statement (PWS), provide guidance, or approve or comment on deliverables. The Task Order Project Officer (TOCOR), the Alternate TOCOR (if the TOCOR is on leave or travel), and the Contracting Officer are the only individuals authorized to issue technical direction. Other government personnel may engage in technical communications with the contractor, but are not authorized to give technical direction, which is the sole basis for the contractor to incur billable costs.

The six tasks described below are interdependent and interrelated with each other. The activities performed by the contractor under certain tasks will inform their work on other tasks in this PWS. Because the tasks below overlap and are not independent of one another, the contractor shall develop some of the deliverables under multiple tasks concurrently, where applicable.

Task 1: Kickoff Meeting, Reporting, and Communication

The contractor shall participate in a Kickoff Meeting with the TOCOR either in person or via conference call to discuss the following: points of contact, roles and responsibilities, timelines, the schedule of benchmarks, milestones and deliverables, establish dates and times for monthly calls and quarterly technical progress reports, and general Task Order administrative information. The technical progress reports shall include status updates of all of the tasks of this PWS. The final progress report in a given year shall be a year-end summary of all the deliverables produced by the contractor throughout the year by task, as well as a report of any challenges encountered for each task.

The TOCOR will coordinate and set-up monthly working calls between EPA staff and the contractor’s technical lead to discuss the status and progress of the work under this Task Order. The contractor shall participate in these monthly calls. The frequency of the monthly conference calls may be modified based on project status at the request of the contractor and only as approved by EPA.

The contractor shall notify the TOCOR of any problems, delays or questions as soon as they arise, including immediate written notification of any Task Order delays. The contractor shall provide a written monthly status report in accordance with contract requirements which will be used for invoice review purposes. All reporting shall be provided in accordance with the PWS Sections G and H.

Task 1 Deliverables:

The contractor shall:

- (1) Participate in kickoff meeting with TOCOR.
- (2) Participate in monthly conference calls with the TOCOR.
- (3) Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
- (4) Provide the TOCOR with monthly written technical progress reports. These reports shall include updates on all applicable activities under Tasks 2 through 6.
- (5) Provide the TOCOR with a summation of the status of all work at the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.
- (6) Provide the TOCOR with timely communication.

In general, written materials including meeting summaries shall be furnished by the contractor within five business days after request in draft form for the TOCOR to review; then a final written deliverable would be expected within five business days after receipt of written technical direction from the TOCOR, including the TOCOR's comments and edits to the draft deliverable.

Task 2: Support for Developing New and Evaluating Existing Source Sector-Based Best Management Practices Efficiencies and Verification of Practice Implementation

EPA requires assistance in developing the technical basis for nitrogen, phosphorus, and sediment load reduction efficiencies for new or existing best management practices (BMPs), treatments, or technologies applied to agricultural, forested, developed, wetlands, flood plains, and streamside lands, onsite septic/treatment systems, tidal shorelines and near shore environments within the Chesapeake Bay watershed. The contractor shall follow the priority lists of BMPs established by the CBP WQGIT's source sector and technical workgroups — agriculture, stormwater, wastewater, forestry, and watershed technical workgroups, as well as the Partnership's other Goal Implementation Teams (GITs) that are involved in this process (i.e., Fisheries GIT, Habitat GIT, and Healthy Watersheds GIT).

The contractor shall follow the CBP WQGIT's approved protocols and procedures (see Section K, "References") for the evaluation, through expert review panels, of the underlining

technical data and information leading to development of approved BMP definitions and efficiencies for use in the CBP models, decision support tools, and accountability tools. The contractor shall support the convening, staffing, and generation of technical analyses, reviews, and syntheses for the expert panels. The contractor shall provide for very specialized expertise and experts as requested by the expert panels; however, this will not require peer review.

The contractor shall assist EPA in identifying and evaluating different approaches to verifying that tracked and reported conservation practices/BMPs, treatments, and technologies have actually been implemented on the ground and are operating as designed. The contractor shall assist in: 1) conducting a regional and national review of existing examples/methodologies for verifying tracked and reported data; 2) evaluating what factors/key components led the respective community to accept (or reject) the verification approach; and 3) evaluating whether and, if so, how these accepted methodologies could be applied to similar situations within the Chesapeake Bay watershed.

EPA will provide the prioritized list of BMPs which the contractor shall follow. For each prioritized CBP BMP/treatments/technologies or set of related BMPs/treatments/technologies identified by the CBP's WQGIT and its associated source sector, technical and land use workgroups, the contractor shall carry out the following tasks. This list is not all inclusive:

- Research, evaluate, and develop recommendations of definitions and effectiveness values for prioritized CBP BMP identified by the CBP's WQGIT and its associated source sector workgroups based on the 2010 Partnership approved *Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model* (BMP Protocol) (see https://www.chesapeakebay.net/who/group/bmp_expert_panels).
- Coordinate with the CBP WQGIT and the appropriate sector, technical, and land use workgroup(s) to convene expert review panels (at least one and no more than six each base and option period) to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. As part of this coordination, the contractor shall convene these expert review panels and secure the necessary external experts (approximately 8-10 experts per panel). EPA anticipates two to three in-person meetings per panel each located in any Bay watershed jurisdiction.
- Research, evaluate, and develop scientifically defensible definitions as determined by CBP's WQGIT, nutrient and sediment reduction effectiveness values, model simulation approaches, and tracking, verification, and reporting methods through collection of technical and modeling information, scientific literature searches, and interviews/surveys.
- Compile all available information for each BMP identified by the expert review panel for recommendation, and assist the panel in developing practice definitions, effectiveness values, tracking, verification, and reporting procedures.

- Participate in respective source workgroup, watershed technical workgroup, land use workgroup, and CBP's WQGIT and other GIT meetings and conference calls during the project when invited to provide project status reports and communicate on initial findings for partnership input during the development process.
- Development of a report for each prioritized BMP/set of BMPs which fully documents the completed and approved BMP evaluations. The report shall provide documentation of the research, evaluation, and approval processes, including final definitions, effectiveness values, and recommended tracking, reporting and verification procedures for each practice. The annual documentation report shall include the following 26 elements, where appropriate, for each BMP evaluated and approved by the Partnership under the BMP Protocol:
 1. Identity the expertise of panel members.
 2. Land use or practice name/title.
 3. Detailed definition of the land use or practice.
 4. Recommended nitrogen, phosphorus, and sediment loading or effectiveness estimates (including discussion which may include alternative modeling approaches, if appropriate to application of the recommended effectiveness estimate).
 5. Justification for the selected effectiveness estimates or loading rates, including a list of references used and comparisons to relevant practices and land use loading rates in the respective source sector and in other source sectors.
 6. Detailed discussion of how each reference was considered.
 7. Land use(s) to which the practice is applied.
 8. Load sources that the practice will address and potential interactions with other practices.
 9. Description of pre-practice and post-practice circumstances, including the baseline conditions for individual practices.
 10. Conditions under which the practice works: include conditions where the practice will not work, or will be less effective.
 11. Any variations in practice effectiveness/practice values across the watershed due to climate, hydrogeomorphic region, soils, or other measureable factors.
 12. Any variations in practice effectiveness/practice value due to design or landscape position (e.g., crop type upslope of riparian buffers, buffer width, canopy and understory species composition, age, etc.)
 13. Temporal performance of the practice including lag times between establishment and full functioning (if applicable).
 14. Unit of measure (e.g., feet, acres).
 15. Locations within the Chesapeake Bay watershed where this practice is applicable.
 16. Useful life; effectiveness of the practice over time.
 17. Identify if the practice is a cumulative or annual practice.
 18. Description of how the practice will be tracked, verified, and reported: include a clear indication of how this practice will be used and reported by jurisdictions.
 19. Identification of any ancillary benefits (e.g., ecosystem services) or unintended consequences beyond impacts on nitrogen, phosphorus, and sediment pollutant loads.

20. Suggestion for a re-evaluation timeline — when will sufficient additional new information be available that may warrant a re-evaluation of the effectiveness or load estimate.
21. Outstanding issues that need to be resolved in the future and a list of ongoing studies, if any.
22. Identification of all operation and maintenance requirements and how neglect alters practice performance.
23. Include negative results: where studies with negative pollution reduction data are found (i.e., the practice acted as a source of pollutants) and address how they were considered along with all other data.
24. Include results where the practice relocated pollutants to a different location. An example is where a practice eliminates a pollutant from surface transport but moves the pollutant into groundwater.
25. Address data applicability — determining which data should be used to develop loading and effectiveness estimates is critical. In considering each source of data, provide a description, as appropriate, on how much influence each data source should have on the final estimate.
26. Documentation of review process — include a comprehensive narrative summary of review process addressing the specific Chesapeake Bay Program workgroups, teams and committees involved, independent peer reviewers, and URL links to the calendar entries of the respective meetings/conference calls posted on the CBP Partnership's web site at <http://www.chesapeakebay.net>.

The TOCOR will furnish the contractor with written technical direction on a case-by-case basis as to the specific scope of the technical support identified above. The contractor shall anticipate working with the TOCOR and staff leads in CBPO and jurisdictions to furnish the requested technical assistance. **However only the TOCOR may issue written technical direction, which will be the sole basis for the contractor to incur billable costs.**

Task 2 Deliverables:

All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support, specifically Microsoft Word for documents, Excel for spreadsheets, and PowerPoint for presentations. The contractor shall:

1. Furnish written monthly progress updates of each activity under this task requested by the TOCOR through technical direction in their quarterly technical progress reports described under Task 1. Include details about activities under this task in the end of project period summation, as described under Task 1, Deliverable 4.
2. Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
3. Coordinate with the TOCOR to convene expert review panels and secure necessary external experts.
4. Compile all data, findings, and recommendations from each expert review panel into a concise written report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups, the Watershed Technical Workgroup, and approval by the CBP WQGIT. A draft shall be provided to the TOCOR within 45 days following the last BMP expert panel meeting for the

- identified priority BMPs. The contractor shall furnish a final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.
5. Compile an annual report by December 1 of each year based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period.

Task 3: Support for Developing Modeling Input Data and Other Modeling-Related Information Needs

The Phase 6 Chesapeake Bay Watershed Model, also known as the Chesapeake Assessment and Scenario tool (CAST), is a steady state web-based application based on a segmentation scheme which divides the Chesapeake Bay watershed into approximately 1,000 segments/sub-basins, with the average size about 64 square miles. CAST simulates loading and transport of nitrogen, phosphorus, and sediment loads from pollutant sources throughout the Bay watershed and provides estimates of watershed nitrogen, phosphorus, and sediment loads resulting from various management scenarios. Nutrient inputs from manure, fertilizers, and atmospheric deposition are based on an annual mass balance of U.S. Census of Agriculture animal populations and crops, records of fertilizer sales, and other data sources. BMPs are incorporated annually. Municipal and industrial wastewater treatment and discharging facilities and onsite wastewater treatment systems' nitrogen, phosphorus, and sediment contributions are also included in CAST.

CAST is designed to track the land use-related nutrient processes for the multiple land use-related sources in the Bay watershed and to facilitate parameterization of those sources for watershed model scenarios. CAST simulates loads related to animal production areas, manure storage, application of manure and fertilizers, septic inputs, plant growth/uptake, and BMP implementation.

CAST and BayFAST are used by the CBP jurisdictional, regional, and local partners to rapidly develop management scenarios for decision-making. The tools are designed to engage local jurisdictions such as counties, municipalities, Planning District Commissions, Soil and Water Conservation Districts, and watershed groups in the BMP implementation planning process. These tools facilitate transparency, consistency, and communication between the state and local governments and the CBP. BayFAST is a version of CAST based on a user-defined area.

These data can help users of the tools to target practices to the most effective location and identify the practices that will have the most pollutant load impact. Enhancement and maintenance of these tools is required to continue to support the seven CBP Partnership watershed jurisdictions' and the local planners' planning for and implementation of the Chesapeake Bay TMDL.

The contractor shall provide specialized technical support for continued enhancement and evolution of this suite of tools to meet the Partnership's objectives under the Chesapeake Bay TMDL. The contractor shall support direct knowledge transfer to the technical staff at the Chesapeake Bay Program Office in Annapolis, Maryland, and the Water Protection Division in Philadelphia, Pennsylvania.

EPA requires assistance in developing the technical basis for multiple model analysis, model development, optimization, modeling input, literature searches, and related data and information needs including support for discussion papers and technical memoranda focused on trading and offsets.

Technical direction will be developed by EPA individually for each area of analysis, development, or research. The TOCOR will furnish the contractor with written technical direction on a case-by-case basis as to the specific scope of the technical support. The contractor shall anticipate working with the TOCOR and staff leads in CBPO and jurisdictions to furnish the requested technical assistance. **However only the TOCOR may issue technical direction, which will be the sole basis for the contractor to incur billable costs.** Specific areas of work may include but are not limited to:

- Determining expected nitrogen, phosphorus, and sediment loading rates from various land uses present within the Chesapeake Bay watershed
- Analyzing various data sources to estimate rates of watershed input from manure, biosolids, fixation, commercial fertilizer, atmospheric deposition, and other sources
- Compiling and analyzing soil phosphorus data with particular attention to uncertainty estimation
- Determining the change in nutrient or sediment load due to changes in inputs or other factors
- Analyzing spatial land use and land cover data
- Analyzing direct sources of nutrients to rivers from waste water or other sources
- Estimating coefficients for physical transport of nutrients and sediment through watersheds, streams, rivers, and impoundments
- Investigating separations between surface flow and base flow and associated nutrient loads.

EPA will provide the prioritized list of needs for the development of pollutant loading estimates, model input data and other modeling-related data, and information needs for which the contractor shall follow. For each prioritized need identified by the CBP WQGIT and its associated land use, source sector, and technical workgroups, the contractor may carry out the following tasks. This list is not all inclusive and some technical directions may not include all tasks:

- Consult with the appropriate CBP Goal Implementation Teams or Workgroups on priority needs relevant to the technical direction. The contractor shall anticipate attending six to eight in-person CBP Partnership meetings under this task in each base and option period. These meetings will principally be located in Annapolis, Md., but they may be located in any of the seven watershed jurisdictions.

- In some cases, it may be necessary to coordinate with the TOCOR to convene expert review panels and secure necessary external experts (approximately 8-10 expert per panel) to develop recommendations to address the identified priorities needs. The contractor shall anticipate attending two to three in-person meetings for each panel (two to 12 total). Meetings will principally be located in Annapolis, MD but they may be located in any of the seven watershed jurisdictions.
- Support the generation of technical analyses, reviews, and syntheses.
- Research key peer-reviewed research studies relevant to the task. The contractor shall provide a detailed description of data resulting from an analysis of key peer-reviewed research studies.
- Provide for very specialized expertise and experts as requested by the CBP Partnership of expert panels such as spatial statistical support.
- Develop spreadsheets, databases, programs, or other necessary technical products.
- Present the findings to the appropriate CBP GIT or Workgroup for review, feedback, and approval.
- Provide technical writing support to the Chesapeake Bay Program's Modeling Workgroup.

Task 3 Deliverables:

All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support. Specific deliverables will be further defined in the Technical Direction. In general, the contractor shall:

- (1) Furnish written monthly progress updates of each activity under this task requested by the TOCOR through technical direction in their quarterly technical progress reports described under Task 1. Include details about activities under this task in the end of project period summation, as described under Task 1, Deliverable 4.
- (2) Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
- (3) Present project plans, results, findings, analyses, and tools to appropriate CBP Workgroups and/or GITs. Review and refine products based on feedback.
- (4) Furnish interim and completed spreadsheets, databases, programs, or other technical products in an appropriate electronic format.
- (5) Provide documentation consistent in format and thoroughness with existing CAST documentation
- (6) Compile an annual report by January 31 of each year that documents progress on tasks.

Task 4: Support Development and Implementation of the Jurisdictions' Watershed Implementation Plans (WIPs)

The contractor shall support EPA in assisting the seven jurisdictions and federal facilities with the development and implementation of their Phase III WIPs. The work will require support, to be requested by the TOCOR, for the following activities, with the specific activities dependent on the nature of the requests received by EPA throughout the base year and each option period from each of the seven jurisdictional partners and its multiple federal partners. This list is not all inclusive.

The TOCOR will furnish the contractor with written technical direction on a case-by-case basis as to the specific jurisdiction, and the scope of the technical support identified below. The contractor shall anticipate working with the TOCOR and staff leads in CBPO and jurisdictions to furnish the requested technical assistance. **However only the TOCOR may issue technical direction, which will be the sole basis for the contractor to incur billable costs.**

It is anticipated that support shall be provided to states simultaneously or iteratively rather than in a stepwise fashion throughout each term of the period of performance. All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support. The contractor shall provide the following support to the seven watershed jurisdictions, federal agencies and federal facilities including, but not limited to:

- Evaluate new and emerging BMPs and technologies for implementation feasibility.
- Support federal facilities with their development of Planning Targets, Milestones and WIPs – as well as tracking and reported progress toward those goals through BMPs submitted to jurisdictions' tracking systems.
- Develop tools and databases for tracking, verifying and reporting on BMPs.
- Review historical and new data entering BMP tracking and reporting systems and eliminating irrelevant information.
- Provide staff and facilitation support for engagement of localities and local partners in WIP implementation, as well as for meetings with stakeholder groups. The contractor shall expect to attend in-person meetings in any of the seven jurisdictions. EPA anticipates zero to four in-person meetings in each jurisdiction each base and option period (one to 28 in-person meetings total in each base and option period). The number of meetings in each base and option period will be dependent on the need of the jurisdictions.
- Provide training to local partners on use and local application of CBP Partnership models and decision support tools, especially CAST (the Phase 6 Watershed Model).
- Support development and implementation of the jurisdictions' Phase III WIPs.
- Support Water Protection Division's assessment of jurisdiction programs related to trading and offsets, as needed.

- Support Water Protection Division's assistance of jurisdiction trading and offset program development.
- Support development of the jurisdictions' two-year milestones.
- Support running management scenarios through the CBP Partnership's models and decision support tools and analysis of the resultant outputs.
- Design explicit strategies to engage local entities at a small scale.
- Create several options and constructs for TMDL implementation at the local scale.
- Data analysis to support local TMDL implementation.
- Research local ordinances and laws within the seven Chesapeake Bay jurisdictions to provide models for best practices.
- Review existing ordinances and evaluate drivers of land use.
- Evaluate the effectiveness of management activities and controls, including cost-effectiveness.
- Support development of scenarios for evaluating different local target loads.
- Furnish technical assistance in evaluating county level/conservation district/local watershed level strategies for reducing nutrient and sediment loads.
- Furnish technical assistance in evaluating unintended consequences and local water quality impacts of installed BMPs.
- Develop tools for supporting decision making on the selection of the most cost effective practices, treatment, and technologies to maximize pollutant load reductions.
- Development of systems to track, organize and consolidate public comments.
- Support pilot studies for evaluating how to best develop more local allocations or local planning goals and how to engage local partners in WIP implementation.
- Support pilot and large-scale studies of innovative financing strategies and innovative technologies to assist the state and local jurisdictions with WIP implementation.
- Support analyses of public health impacts (e.g., drinking water, source water protection) of nutrient and sediment pollution to drive increased implementation.
- Develop/update databases and GIS layers of regulated and non-regulated sources, locations, and loads of nutrient and sediment pollution.

- Assist the states and local jurisdictions with the acquisition of land use data sets for incorporation into the Chesapeake Bay Program's modeling tools.
- Conduct cost effectiveness and efficiency analyses of existing, proposed, and potential federal, state, regional, and local agency programs, regulations, statutes and policies directing implementation of nutrient and sediment load reduction practices and technologies with an emphasis on nonpoint sources.
- Identify regulatory, financial, policy gaps and evaluate capacity of existing jurisdictional/local programs and infrastructure necessary to support sustained implementation at the levels called for within the jurisdictions' respective WIPs and two-year milestones.
- Evaluate how federal, state, regional, and local governmental partner agencies, non-governmental organizations, and stakeholders have committed to offsetting the growth in nutrient and sediment loads due to continued growth and development in the watershed.
- Provide expertise in program analysis, work model/work flow analysis, and financing necessary to systematically identify, understand, and determine how to overcome barriers to achieving higher levels of programmatic implementation consistent with implementation rates called for in the jurisdictions' WIPs and two-year milestones.
- Provide expertise and support in developing communication and outreach strategies for the Chesapeake Bay TMDL's 2017 Midpoint Assessment outcomes and the Phase III WIPs.
- Coordinate with Chesapeake Bay Program partners and stakeholders on other communication plans that are being developed in support of the Midpoint Assessment outcomes and the jurisdictions' Phase III WIPs.
- Develop a communications mechanism/forum to document and share state and local implementation success stories.
- Provide logistical support for meetings and forums with state and local stakeholders on the jurisdictions' Phase III WIPs and outcomes from the Chesapeake Bay TMDL's 2017 Midpoint Assessment.
- Provide support for developing communications materials for communicating Midpoint Assessment findings with an array of partners and stakeholders.
- Provide critical support to the Partnership's Modeling Workgroup and Water Quality Goal Implementation Team on behalf of West Virginia to continue the leadership role in the development and implementation of the Phase III WIP planning targets and West Virginia's Phase III WIP.
- Support development of private sector Incentive Programs to accelerate implementation of BMPs to accelerate nutrient and sediment reductions necessary to

meet WIP goals. Support includes conducting model analysis to identify practices and implementation levels to promote, developing tools and training materials for practice verifiers, and analyzing appropriate incentives.

- Support analysis of reductions achieved and funding spent to-date to better target future cost-effective implementation strategies.
- Support implementation of strategies to reduce additional loads from the Conowingo Dam.

Task 4 Deliverables:

All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support. The contractor shall:

- (1) Furnish written monthly progress updates of each activity under this task requested by the TOCOR through technical direction in their quarterly technical progress reports described under Task 1. Include details about activities under this task in the end of project period summation, as described under Task 1, Deliverable 4.
- (2) Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
- (3) Provide draft products (e.g. documents, databases) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.
- (4) Provide the TOCOR with annual written documentation and compilation of products produced for the seven watershed jurisdictions under this task by January 31 of each year. This documentation shall include all products produced through December 31 of the previous year.
- (5) Provide the TOCOR with documentation of support provided to the jurisdictions in development of their Phase III WIPs by June 28, 2019.

Task 5: Technical Support for Development and Application of Decision Support Tools

The contractor shall provide specialized technical support for continued enhancement and evolution of the suite of tools described under task 3 to meet the Partnership's objectives under the Chesapeake Bay TMDL. The contractor shall support the direct knowledge transfer to the technical staff at the Chesapeake Bay Program Office in Annapolis, Maryland, and the Water Protection Division in Philadelphia, Pennsylvania.

The contractor shall:

- Assist EPA in working with state and other partners to respond to jurisdiction requests for new and interim BMPs.

- Assist EPA in working with the Optimization Advisory Support Committee and technical staff in providing BMP optimization scenarios as part of CAST.
- Build these requests into the CBP Partnership's modeling tools.
- Analyze and troubleshoot states' concerns about Scenario Builder and CAST/BayFAST inputs and outputs.
- Provide input to EPA in responding to state requests to modify CAST/BayFAST, documenting changes and updates to these tools.
- Aid in the transfer of CAST/BayFAST technology to the partners.
- Travel to CBPO in Annapolis, MD periodically for in-person meetings when needed. There will likely be three to four in-person meetings in each base and option period.

The TOCOR will furnish the contractor with written technical direction on a case-by-case basis as to the scope of the technical support identified above and below. It is anticipated that support on this suite of tools shall be provided simultaneously or iteratively rather than in a stepwise fashion throughout each term of the period of performance. The contractor shall anticipate working with the TOCOR and staff leads in CBPO and jurisdictions to furnish the requested technical assistance. **However only the TOCOR may issue technical direction, which will be the sole basis for the contractor to incur billable costs.**

The contractor shall carry out the following activities for each model below, recognizing much of this work is interrelated and interconnected between more than one modeling tool, decision support tool, BMP tracking, verification, and reporting system, and accountability tool. This list is not all inclusive.

CAST/BayFAST

- Support ongoing development of and periodic updates to web publication of detailed documentation.
- Consult with the CBP WQGIT, the Land Use Workgroup, the Watershed Technical Workgroup, and source sector workgroups on priority needs for further review and refinement of existing or development of new loading estimates, model input data, or other watershed modeling needs.
- As described under Task 2, coordinate with the TOCOR to convene expert review panels to develop recommendations to address the identified priorities needs. All of the work under this activity is covered by the expert review panels activities under Task 2.
- Continue making partnership-requested improvements and enhancements to CAST/BayFAST based on priorities established by the WQGIT and the Modeling Workgroup.

- Assist EPA in organizing and facilitating meetings of jurisdictional partners focused on requests for review and approval of new and interim BMPs for incorporation into CAST/BayFAST, and other CBP modeling tools.
- Identify to EPA and assist in working through issues related to incorporation of these BMPs into CAST/BayFAST and other CBP modeling tools.
- Provide technical and logistical support to the review and approval of BMPs for incorporation into the CBP modeling tools.
- Incorporate the approved new and interim BMPs in CAST/BayFAST.
- Collaborate with CBPO staff and partners (such as the BMP Optimization Advisory and Support Committee) in the development of BMP optimization components of CAST – including the gathering of requirements, creating a parallel version of CAST through recoding, and building a ‘flat’ database and interface.
- Assist EPA in responding to jurisdictional and other partners’ questions about CAST/BayFAST and requests to better understand how CAST/BayFAST processes their data.
- Conduct analyses of CAST/BayFAST inputs and outputs to troubleshoot and diagnose concerns raised by the jurisdictions and other partners and make recommendations to EPA for addressing these concerns.
- Assist EPA in responding to jurisdictional requests for modifications of CAST/BayFAST.
- Develop expanded CAST/BayFAST documentation and work to continually update the documentation as changes are made.
- Enhance the CAST Portal and CAST user interface to facilitate use and understanding of model inputs and outputs.
- Assist EPA in transferring the CAST/BayFAST technology and the understanding of how it functions to jurisdictional and other CBP partners, including but not limited to coordinating trainings on CAST/BayFAST.
- Work with CAST/BayFAST users directly to address the following issues on an on-going basis:
 - Analyze scenarios from CAST/BayFAST to answer questions and address concerns by jurisdictions.
 - Provide technical support and training on the tools to facilitate WIP and milestone preparation by local government agencies.
 - Update documentation as changes are made to the tools.
- Provide Partnership-based prioritization of CAST/BayFAST update tasks to developers.

- Modification of CAST/BayFAST as agreed upon by member jurisdictions and CBP.
- Provide technical training to Chesapeake Bay Program Office staff on CAST/BayFAST.
- Organize and deliver trainings in various locations throughout the watershed, as requested by the seven Bay jurisdictions. The number of jurisdiction-specific training sessions will vary in each base and option period. Whether these sessions will be webinars, in-person meetings or a combination of the two will be determined based on needs expressed by each jurisdiction. The need for training sessions will likely only occur after the release of each new version of the tool. As part of these trainings the contractor shall:
 - Locate the appropriate facilities for each training session with the necessary amenities.
 - Work with the Chesapeake Bay Program Office, Water Protection Division, and relevant jurisdictions to publicize the trainings.
 - Register the participants.
 - Deliver training which includes administering the conference code and webinar; leading the training; and responding to participants' questions both during the training and after.
 - Post all training presentations, supporting materials, and responses to questions received during each training session on CAST.chesapeakebay.net within three business days of training.
- Support ongoing development of, updates to, and web publication of detailed Scenario Builder and CAST/BayFAST documentation.
- Coordinate the gathering of requirements and building of optimization functionality in Phase 6 CAST. This includes working with partners to identify functionality, recoding CAST, and rebuilding the database to facilitate the creation of optimization scenarios in CAST. Facilitate development of cost effectiveness rankings and BMP co-benefits.

Task 5 Deliverables:

All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support. The contractor shall:

- (1) Furnish written monthly progress updates of each activity under this task requested by the TOCOR through technical direction in their quarterly technical progress reports described under Task 1. Include details about activities under this task in the end of project period summation, as described under Task 1, Deliverable 4.
- (2) Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
- (3) Provide annual submissions by January 31 of each year of updated Watershed Model and CAST/BayFAST documentation.

- (4) Provide draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.
- (5) Provide annual documentation and compilation by December 1 of each year of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.
- (6) Create the next annual version of CAST and BayFAST by incorporating the high priority refinements and modifications requested by the WQGIT and the watershed jurisdictions by December 1 of each year.
- (7) Provide to the TOCOR an initial draft version of CAST with BMP optimization capabilities – which will be limited in scope (e.g., county-scale, fewer BMPs, partial co-benefits) by October 2018.
- (8) Document all results from the suite of management scenarios requested by the jurisdictions supporting the jurisdictions' development of their Phase III WIPs by May 31, 2019.

Task 6: Support for Exchange Network-Based BMP Tracking, Verification, and Reporting

The contractor shall assist EPA with continued development and enhancement of the Chesapeake Bay Node on the National Environmental Information Exchange Network (NEIEN). NEIEN is a national network facilitating data sharing among partners. The Chesapeake Bay Program's implementation of NEIEN facilitates transfer of BMP implementation numbers from state and federal partners to CBP for use in modeling, accounting for, and evaluation progress under the jurisdictions' two year milestones. The contractor shall also provide specialized technical support for continued enhancement and evolution of the CBP Partnership's tools and larger accountability framework for tracking, verification, and reporting of BMP and other nutrient and sediment load reduction treatments and technologies to meet the Partnership's objectives under the Chesapeake Bay TMDL midpoint assessment. The CBP Partnership has publicly committed to the development, adoption, and long term implementation and adaptation of a basin wide framework for verification of implemented practices, treatments, and technologies being credited for nutrient and sediment pollutant load reductions (see Appendix K, References).

The contractor shall provide documentation of all enhancements and additions to the Chesapeake Bay NEIEN node and the CBP Partnership's BMP tracking, verification, and reporting system. The contractor shall actively support the direct knowledge transfer to the technical staff at the Chesapeake Bay Program Office in Annapolis, Maryland, and the Water Protection Division in Philadelphia, Pennsylvania.

The TOCOR will furnish the contractor with written technical direction on a case-by-case basis as to the specific jurisdiction, and the scope of the technical support identified below. The contractor shall anticipate working with the TOCOR and staff leads in CBPO and jurisdictions to furnish the requested technical assistance. **However only the TOCOR may**

issue technical direction, which will be the sole basis for the contractor to incur billable costs.

It is anticipated that support shall be provided to states simultaneously or iteratively rather than in a stepwise fashion throughout each term of the period of performance. The contractor shall provide the following support to the seven watershed jurisdictions, but not limited to:

- Organize and facilitate meetings between providers of data and CBP users of the information to ensure accurate and timely submission of data and appropriate interpretation of the data.
- Provide support to the seven watershed jurisdictions as requested to support work on their state NEIEN nodes, development and implementation of jurisdiction-specific databases and mechanisms for enhancing tracking, verification and reporting of BMP data, and clean-up of their historical BMP databases.
- Build in mechanisms for certifying verification of the inbound BMP data following the protocols and procedures agreed to by the CBP Partnership.
- Link EPA's Integrated Compliance Information System (ICIS) and/or Permit Compliance System (PCS) with the Chesapeake Bay NEIEN node to ensure full network-based exchange of data.
- Work with NEIEN participants directly to address issues on an ongoing basis.
- Work to provide for full provision of NEIEN data for each annual progress scenario run.
- Summarize lessons learned from the prior year of NEIEN implementation and recommend further enhancements.
- Develop custom plug-ins for documenting receipt and validating format of inbound BMP flow data.
- Develop custom plug-ins or outbound services to serve as inputs to CAST/ BayFAST.
- Manage the BMP schema, including necessary changes to broaden the applicability required to satisfy other programmatic needs.
- Implement BMP processing rules and requirements to be included within Scenario Builder infrastructure.
- Provide technical training to Chesapeake Bay Program Office and Water Protection Division staff on the NEIEN.
- Support knowledge transfer to the technical staff at the Chesapeake Bay Program Office and Water Protection Division.
- Document all enhancements and additions to Chesapeake Bay Node on the NEIN.

- Develop updates to and web publication of detailed NEIEN documentation.
- Travel to CBPO in Annapolis, Md., when in-person meetings are required. There likely will be one formal in-person meeting each base and option period.

Task 6 Deliverables:

All written documentation and files produced by the contractor and provided to the TOCOR shall be in an electronic format that EPA can support. The contractor shall:

- (1) Furnish written monthly progress updates of each activity under this task requested by the TOCOR through technical direction in their quarterly technical progress reports described under Task 1. Include details about activities under this task in the end of project period summation, as described under Task 1, Deliverable 4.
- (2) Provide immediate written notification to the TOCOR of any delays in completing any activities under this task.
- (3) Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.
- (4) Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 1 of each year. This documentation shall include all products produced through December 31 of the previous year.

F. SCHEDULE OF BENCHMARKS & DELIVERABLES

All deliverables developed under this Task Order must be provided to the TOCOR in an electronic format supported by EPA. Reports must be of high quality. Work must reflect a high level of technical proficiency and be clearly explained and documented.

Base Period (April 1, 2018 – March 31, 2019)

Task No.	Deliverable	Schedule
1	1.1 Kickoff meeting.	Within 10 business days of award.
	1.2 Monthly conference calls with the TOCOR.	Monthly
	1.3 Immediate written notification to the TOCOR of any delays in completing any activities under this task.	Ongoing
	1.4 Monthly written technical progress reports to TOCOR. These reports shall include updates on all	Monthly

	<p>applicable activities under Tasks 2 through 6.</p> <p>1.5 Annual summation of the status of all work at the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.</p> <p>1.6 Timely communication with TOCOR.</p>	<p>March 1, 2019</p> <p>Ongoing</p>
2	<p>2.3 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. There shall be at least one and no more than six panels in the base period.</p> <p>2.4 Compile all data, findings, and recommendations from each expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups, the Watershed Technical Workgroup, and approval by the CBP's WQGIT.</p> <p>2.5 Annual report based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period. The report shall provide documentation of the</p>	<p>Within 45 days of receiving technical direction from the TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>December 1, 2018</p>

	research, evaluation and approval processes, including final definitions and effectiveness values for each practice. The annual documentation report shall include the 26 elements, where appropriate, for each BMP evaluated and approved by the Chesapeake Bay Program Partnership under the BMP Protocol.	
3	<p>3.3 Consult with the CBP WQGIT and the source sector workgroups at least once during the base period on priority needs for further review and refinement of existing or development of new loading estimates, model data inputs, or other modeling related data and information needs.</p> <p>3.4 Consult with the TOCOR prior to convening the expert review panels. There shall be at least one and no more than four panels in the base period.</p> <p>3.5 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations to address the identified priorities needs. There shall be at least one and no more than four panels in the base period.</p> <p>3.6 Compile all data, findings, and recommendations from each convened expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT and other GITs as appropriate.</p> <p>3.7 Annual report that documents completed and approved set of land use loading rates, modeling input data, or other modeling related data</p>	<p>Once per base period, timing to be determined through coordination of TOCOR and contractor.</p> <p>Ongoing</p> <p>Timing dependent on technical direction from TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>August 3, 2018</p>

	and information need during the reporting period.	
4	<p>4.3 Draft products (e.g. documents, databases) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>4.4 Annual documentation and compilation of products produced for the seven watershed jurisdictions under this task.</p>	<p>Ongoing</p> <p>August 3, 2018</p>
5	<p>5.3 Annual submissions of updated Watershed Model and CAST/BayFAST documentation.</p> <p>5.4 Draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>5.5 Annual documentation and compilation of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.</p>	<p>January 31, 2019</p> <p>Ongoing</p> <p>December 1, 2018</p> <p>December 1, 2018</p>

	5.6 Create the next annual version of CAST and BayFAST by incorporating the high priority refinements and modifications requested by the WQGIT and the watershed jurisdictions.	
6	<p>6.3 Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>6.4 Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 3 of each year. This documentation shall include all products produced through December 31 of the previous year.</p>	<p>Ongoing</p> <p>August 3, 2018</p>

Option Period I (April 1, 2019 – March 31, 2020)

Task No.	Deliverable	Schedule
1	<p>1.1 Kickoff meeting.</p> <p>1.2 Monthly conference calls with the TOCOR.</p> <p>1.3 Immediate written notification to the TOCOR of any delays in completing any activities under this task.</p> <p>1.4 Monthly written technical progress reports to TOCOR. These reports shall include updates on all applicable activities under Tasks 2 through 6.</p>	<p>Within 10 business days of the start of Option Period I.</p> <p>Monthly</p> <p>Ongoing</p> <p>Monthly</p> <p>March 1, 2020</p>

	<p>1.5 Provide the TOCOR with a summation of the status of all work at the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.</p> <p>1.6 Timely communication with TOCOR.</p>	Ongoing
2	<p>2.3 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. There shall be at least one and no more than six panels in this option period.</p> <p>2.4 Compile all data, findings, and recommendations from each expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT.</p> <p>2.5 Annual report based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period. The report shall provide documentation of the research, evaluation and approval processes, including final definitions and effectiveness values for each practice. The annual documentation report shall include the 26 elements, where</p>	<p>Within 45 days of receiving technical direction from the TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>December 1, 2019</p>

	appropriate, for each BMP evaluated and approved by the Chesapeake Bay Program Partnership under the BMP Protocol.	
3	<p>3.8 Consult with the CBP's WQGIT and the source sector workgroups at least once during the base period on priority needs for further review and refinement of existing or development of new loading estimates, model data inputs, or other modeling related data and information needs.</p> <p>3.9 Consult with the TOCOR prior to convening the expert review panels. There shall be at least one and no more than four panels in the base period.</p> <p>3.10 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations to address the identified priorities needs. There shall be at least one and no more than four panels in the base period.</p> <p>3.11 Compile all data, findings, and recommendations from each convened expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT and other GITs as appropriate.</p> <p>3.3 Annual report that documents completed and approved set of land use loading rates, modeling input data, or other modeling related data and information need during the reporting period.</p>	<p>Once per year, timing to be determined through coordination of TOCOR and contractor.</p> <p>Ongoing</p> <p>Timing dependent on technical direction from TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>August 3, 2019</p>
4	4.3 Draft products (e.g. documents, databases) to the TOCOR as delineated in written technical directions furnished by the TOCOR.	Ongoing

	<p>After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>4.4 Annual documentation and compilation of products produced for the seven watershed jurisdictions under this task. This documentation shall include all products produced from January 1, 2019–December 31, 2019.</p>	January 31, 2020
5	<p>5.3 Annual submissions of updated Watershed Model and CAST/ BayFAST documentation.</p> <p>5.4 Draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>5.5 Annual documentation and compilation of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.</p> <p>5.6 Create the next annual version of CAS and BayFAST by incorporating the high priority refinements and</p>	<p>January 31, 2020</p> <p>Ongoing</p> <p>December 1, 2019</p> <p>December 1, 2019</p>

	<p>modifications requested by the WQGIT and the watershed jurisdictions.</p> <p>5.7 Submit to the TOCOR an initial version of integrated draft Phase 6 Chesapeake Bay watershed model integrated with supporting versions of CAST/ BayFAST.</p>	December 1, 2019
6	<p>6.3 Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>6.4 Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 3 of each year. This documentation shall include all products produced through December 31 of the previous year.</p>	<p>Ongoing</p> <p>August 3, 2019</p>

Option Period II (April 1, 2020 – March 31, 2021)

1	<p>1.1 Kickoff meeting.</p> <p>1.2 Monthly conference calls with the TOCOR.</p> <p>1.3 Immediate written notification to the TOCOR of any delays in completing any activities under this task.</p> <p>1.4 Monthly written technical progress reports to TOCOR. These reports shall include updates on all applicable activities under Tasks 2 through 6.</p>	<p>Within 10 business days of start of Option Period II.</p> <p>Monthly</p> <p>Ongoing</p> <p>Monthly</p>
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	<p>1.5 Provide the TOCOR with a summation of the status of all work at the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.</p>	March 1, 2021
	1.6 Timely communication with TOCOR.	Ongoing
2	<p>2.3 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. There shall be at least one and no more than twelve panels this option period.</p> <p>2.4 Compile all data, findings, and recommendations from each expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT.</p> <p>2.5 Annual report based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period. The report shall provide documentation of the research, evaluation and approval processes, including final definitions and effectiveness values for each practice. The annual documentation report shall include the 26 elements, where appropriate, for each BMP evaluated</p>	<p>Within 45 days of receiving technical direction from the TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>December 1, 2020</p>

	and approved by the Chesapeake Bay Program Partnership under the BMP Protocol.	
3	<p>6.3 Consult with the CBP's WQGIT and the source sector workgroups at least once during the base period on priority needs for further review and refinement of existing or development of new loading estimates, model data inputs, or other modeling related data and information needs.</p> <p>6.4 Consult with the TOCOR prior to convening the expert review panels. There shall be at least one and no more than four panels in the base period.</p> <p>6.5 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations to address the identified priorities needs. There shall be at least one and no more than four panels in the base period.</p> <p>6.6 Compile all data, findings, and recommendations from each convened expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT and other GITs as appropriate.</p> <p>3.3 Annual report that documents completed and approved set of land use loading rates, modeling input data, or other modeling related data and information need during the reporting period.</p>	<p>Once per year, timing to be determined through coordination of TOCOR and contractor.</p> <p>Ongoing</p> <p>Timing dependent on technical direction from TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>January 31, 2021</p>
4	4.3 Draft products (e.g. documents, databases) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will	Ongoing

	<p>provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>4.4 Annual documentation and compilation of products produced for the seven watershed jurisdictions under this task. This documentation shall include all products produced from January 1, 2015–December 31, 2015.</p>	<p>January 31, 2021</p>
5	<p>5.3 Annual submissions of updated Watershed Model and CAST/ BayFAST documentation.</p> <p>5.4 Draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>5.5 Annual documentation and compilation of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.</p> <p>5.6 Create the next annual version of CAST and BayFAST by incorporating the high priority refinements and modifications</p>	<p>January 31, 2021</p> <p>Ongoing</p> <p>December 1, 2020</p> <p>December 1, 2020</p>

	<p>requested by the WQGIT and the watershed jurisdictions.</p> <p>5.8 Provide to the TOCOR the next versions of CAST//BayFAST, supporting calibration of the second draft version of the Phase 6 Chesapeake Bay watershed model, to the TOCOR</p>	December 1, 2020
6	<p>6.3 Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>6.4 Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 3 of each year. This documentation shall include all products produced through December 31 of the previous year.</p>	<p>Ongoing</p> <p>August 3, 2020</p>

Option Period III (April 1, 2021 – March 31, 2022)

1	<p>1.1 Kickoff meeting.</p> <p>1.2 Monthly conference calls with the TOCOR.</p> <p>1.3 Immediate written notification to the TOCOR of any delays in completing any activities under this task.</p> <p>1.4 Monthly written technical progress reports to TOCOR. These reports shall include updates on all applicable activities under Tasks 2 through 7.</p>	<p>Within 10 business days of start of Option Period III.</p> <p>Monthly</p> <p>Ongoing</p> <p>Monthly</p>
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	<p>1.5 Provide the TOCOR with a summation of the status of all work at the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.</p> <p>1.6 Timely communication with TOCOR.</p>	<p>March 1, 2022</p> <p>Ongoing</p>
2	<p>2.3 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. There shall be at least one and no more than six panels this option period.</p> <p>2.4 Compile all data, findings, and recommendations from each expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT.</p> <p>2.5 Annual report based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period. The report shall provide documentation of the research, evaluation and approval processes, including final definitions and effectiveness values for each practice. The annual documentation report</p>	<p>Within 45 days of receiving technical direction from the TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>December 1, 2021</p>

	shall include the 26 elements, where appropriate, for each BMP evaluated and approved by the Chesapeake Bay Program Partnership under the BMP Protocol.	
3	<p>6.5 Consult with the CBP's WQGIT and the source sector workgroups at least once during the base period on priority needs for further review and refinement of existing or development of new loading estimates, model data inputs, or other modeling related data and information needs.</p> <p>6.6 Consult with the TOCOR prior to convening the expert review panels. There shall be at least one and no more than four panels in the base period.</p> <p>6.7 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations to address the identified priorities needs. There shall be at least one and no more than four panels in the base period.</p> <p>6.8 Compile all data, findings, and recommendations from each convened expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT and other GITs as appropriate.</p> <p>3.3 Annual report that documents completed and approved set of land use loading rates, modeling input data, or other modeling related data and information need during the reporting period.</p>	<p>Ongoing</p> <p>Once per year, timing to be determined through coordination of TOCOR and contractor.</p> <p>Ongoing</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>January 31, 2022</p>
4	4.3 Draft products (e.g. documents, databases) to the TOCOR as delineated in written technical	Ongoing

	<p>directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>4.4 Annual documentation and compilation of products produced for the seven watershed jurisdictions under this task.</p>	<p>January 31, 2022</p>
5	<p>5.3 Annual submissions of updated Watershed Model and CAST/BayFAST documentation.</p> <p>5.4 Draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>5.5 Annual documentation and compilation of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.</p> <p>5.6 Create the next annual version of CAST and BayFAST by incorporating the high priority refinements and modifications</p>	<p>January 31, 2022</p> <p>Ongoing</p> <p>December 1, 2021</p> <p>December 1, 2021</p>

	<p>requested by the WQGIT and the watershed jurisdictions.</p> <p>5.9 Provide the TOCOR the next versions of CAST/BayFAST to the TOCOR.</p>	<p>Draft: September 1, 2021 Final: December 1, 2021</p>
6	<p>6.9 Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 3 of each year. This documentation shall include all products produced through December 31 of the previous year.</p>	<p>Ongoing</p> <p>August 3, 2021</p>

Option Period IV (April 1, 2022 – March 31, 2023)

1	<p>1.7 Kickoff meeting.</p> <p>1.8 Monthly conference calls with the TOCOR.</p> <p>1.9 Immediate written notification to the TOCOR of any delays in completing any activities under this task.</p> <p>1.10 Monthly written technical progress reports to TOCOR. These reports shall include updates on all applicable activities under Tasks 2 through 7.</p> <p>1.11 Provide the TOCOR with a summation of the status of all work at</p>	<p>Within 10 business days of start of Option Period IV. Monthly</p> <p>Ongoing</p> <p>Monthly</p> <p>March 1, 2023</p>
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	<p>the end of each project period. At a minimum, this summation shall include a summary of deliverables completed, deliverables in progress with expected delivery dates, and a status report of expected trailing expenditures (including LOE hours) for the project period. The summation shall also include a brief description of challenges encountered during the project period and any lessons learned.</p> <p>1.12 Timely communication with TOCOR.</p>	Ongoing
2	<p>2.6 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations of BMP definitions, effectiveness values, tracking, verification, and reporting procedures for approval as required under the BMP Protocol process. There shall be at least one and no more than six panels this option period.</p> <p>2.7 Compile all data, findings, and recommendations from each expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT.</p> <p>2.8 Annual report based on the BMP Protocol requirements that documents completed and approved BMP project evaluations during the reporting period. The report shall provide documentation of the research, evaluation and approval processes, including final definitions and effectiveness values for each practice. The annual documentation report shall include the 26 elements, where appropriate, for each BMP evaluated</p>	<p>Within 45 days of receiving technical direction from the TOCOR.</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>December 1, 2022</p>

	and approved by the Chesapeake Bay Program Partnership under the BMP Protocol.	
3	<p>6.10 Consult with the CBP's WQGIT and the source sector workgroups at least once during the base period on priority needs for further review and refinement of existing or development of new loading estimates, model data inputs, or other modeling related data and information needs.</p> <p>6.11 Consult with the TOCOR prior to convening the expert review panels. There shall be at least one and no more than four panels in the base period.</p> <p>6.12 Coordinate with TOCOR to convene expert review panels and secure necessary external experts to develop recommendations to address the identified priorities needs. There shall be at least one and no more than four panels in the base period.</p> <p>6.13 Compile all data, findings, and recommendations from each convened expert review panel into a concise report, as described above, in a consistent format which facilitates review by the appropriate source sector workgroups and approval by the CBP's WQGIT and other GITs as appropriate.</p> <p>3.4 Annual report that documents completed and approved set of land use loading rates, modeling input data, or other modeling related data and information need during the reporting period.</p>	<p>Ongoing</p> <p>Once per year, timing to be determined through coordination of TOCOR and contractor.</p> <p>Ongoing</p> <p>Provide draft within 45 days following the last BMP expert panel meeting for the identified priority BMPs. Provide final product incorporating the TOCOR's comments within seven days of receiving the TOCOR's comments.</p> <p>January 31, 2023</p>
4	4.5 Draft products (e.g. documents, databases) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each	Ongoing

	<p>draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>4.6 Annual documentation and compilation of products produced for the seven watershed jurisdictions under this task.</p>	January 31, 2023
5	<p>5.7 Annual submissions of updated Watershed Model and CAST/BayFAST documentation.</p> <p>5.8 Draft products (e.g. documents, databases, modifications to the suite of tools in this Task) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>5.9 Annual documentation and compilation of technology transfer products (e.g., documents, presentations, workshop summaries, webinar summaries, syntheses of feedback from training session participants) prepared and delivered over the prior year.</p> <p>5.10 Create the next annual version of CAST and BayFAST by incorporating the high priority refinements and modifications requested by the WQGIT and the watershed jurisdictions.</p>	<p>January 31, 2023</p> <p>Ongoing</p> <p>December 1, 2022</p> <p>December 1, 2022</p>

	5.10 Provide the TOCOR the next versions of CAST/BayFAST to the TOCOR.	Draft: September 1, 2022 Final: December 1, 2022
6	<p>6.14 Provide draft products (e.g. documents, databases, computer code changes) to the TOCOR as delineated in written technical directions furnished by the TOCOR. After EPA review and vetting of each draft product, the TOCOR will provide written comments to the contractor. The contractor shall incorporate the comments from the TOCOR and provide the revised draft to the TOCOR within the timeframe specified in the written technical direction.</p> <p>Provide the TOCOR with annual documentation and compilation of products produced for the seven watershed jurisdictions and for EPA under this task by August 3 of each year. This documentation shall include all products produced through December 31 of the previous year.</p>	<p>Ongoing</p> <p>August 3, 2022</p>

When the Task Order reaches 30 calendar days prior to the end of the Period of Performance in a given period, the contractor shall make a determination that the deliverables, milestones, benchmarks, and any outstanding technical direction from the TOCOR, will be satisfactorily completed in the form requested in the PWS by the end of the Period of Performance and for the remaining funding that is available.

If the contractor determines one or more of the above-referenced items will not be able to be completed in the requested form within the period of performance and with the available funding, the contractor shall notify the TOCOR and the CO immediately. Within five business days of said notification, the TOCOR in coordination with the CO will provide technical direction concerning use of the remaining funding to prepare and furnish to the TOCOR all interim draft deliverables, interim work products, and any working files in an electronic format which is supported by EPA, for eventual continuation of the project after the end date of the Task Order.

G. REPORTING

All documentation and reporting under this Task Order shall be in compliance with contract requirements.

H. DELIVERABLES AND GENERAL PERFORMANCE

The contractor shall participate in meetings and conference calls arranged by the EPA TOCOR. The contractor shall, when requested by the TOCOR, provide supporting documentation when EPA is reviewing draft deliverables to facilitate EPA review and approval of the contractor's work. Documentation will include the electronic files and detailed, written explanation of all steps and decisions. The contractor is expected to comply with this request when it is received from the TOCOR regardless of whether such a request is described in the individual tasks of this PWS. The contractor is expected to furnish this information in such manner that no proprietary software will be needed for EPA to read, interpret, replicate or model any work product of this agreement, unless otherwise noted in this PWS or by written permission of the EPA TOCOR. The objective is that anyone with the appropriate skill level can use the information produced under this Task Order to check or duplicate the contractor's work for replication and/or verification. With this understanding of how this Task Order's data will be used, any elements essential to successfully replicating analysis shall be provided to EPA in a commonly-used format.

The contractor shall provide to the TOCOR written evidence of the contractor's scientific/technical and editorial review as defined in section 2.6 of the Prime Contract Performance Work Statement on any Task Order **draft** product before submission to the EPATOCOR for review. This process does not need to be performed by an independent peer reviewer. It is expected that all editorial review comments will be addressed before deliverables are furnished to the EPA TOCOR for review (in the case of draft deliverables) or acceptance (in the case of final deliverables); and that questions raised by scientific/technical review will be either addressed or discussed with the EPA TOCOR prior to the contractor furnishing draft deliverables.

EPA anticipates that the contractor's work will be judged "satisfactory" according to the QASP if the TOCOR's edits to deliverables are no more than ten percent (10%) of the content of any draft deliverable, or less than two percent (2%) of any final deliverable. In addition, EPA anticipates that the Contractor's work will be judged "satisfactory" according to the QASP if less than ten percent (10%) of the pages of written final deliverables contain the TOCOR's edits for such things as grammar, punctuation and format. The EPA TOCOR can upon request furnish a copy of the EPA correspondence manual for the contractor's use.

All deliverables (draft and final) to EPA shall be furnished in an electronic format that EPA can support (see TSAWP Contract PWS Section 4.0 Deliverables). All final deliverables shall be prepared according to EPA publication guidelines and shall be compliant with Section 508 of the Americans with Disabilities Act.

All draft and final deliverables from the contractor under this PWS are potentially subject to Freedom of Information Act (FOIA) requests.

All submittals to EPA shall be formatted as described below:

- Any written reports, summaries or analysis documents shall be in electronic Microsoft Word®.
- Any and all spreadsheets, raw data, coding and modeling work (including all model runs with essential data to replicate model runs) shall be in electronic Microsoft Excel® or XML formats.

Appropriate electronic format that is supported by EPA and printing of all GIS data layers, maps, photos, bench sheets and other written material not easily printed or saved in the above formats will be discussed and a format agreed upon with the EPA TOCOR prior to submittal by the contractor.

I. ANTICIPATED TRAVEL

All travel under this Task Order shall be in compliance with contract requirements and only according to specific written Technical Direction from the TOCOR. (See contract clause H-17). The following travel is anticipated under the following Tasks:

- Task 2 — Travel to two to three in-person meetings per panel located in any Bay watershed jurisdiction, for a total of two to 12 in-person meetings each base and option period. The contractor shall anticipate 8-10 experts on each panel.
- Task 4 — Travel to attend in-person meetings in any of the seven jurisdictions. EPA anticipates zero to four in-person meetings in each jurisdiction each base and option period (one to 28 in-person meetings total in each base and option period). The number of meetings in each base and option period will be dependent on the need of the jurisdictions.
- Task 5 — Travel to watershed jurisdictions for meetings and training sessions. The actual number of meetings will be dependent on the nature of the work with each jurisdiction, but likely no more than seven in-person meetings or training sessions per year (one per jurisdiction, with the training and meeting combined in one trip).
- Task 6 — Very limited travel anticipated, with the vast majority of the interactions being conducted through conference calls. Anticipate one in-person meeting per year to CBPO in Annapolis, MD, which can be combined with other meetings in Annapolis.

Based on the above information, in each base and option period the contractor shall expect 14 to 58 in-person meetings throughout the Bay watershed and nine to 12 in-person meetings at CBPO in Annapolis, MD. The length of the meetings and amount of contractor personnel needed for each trip will be provided to the contractor through written technical direction from the TOCOR. The contractor should generally anticipate the participation of 1-2 contractor staff at these meetings.

J. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as Contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the EPA TOCOR.

I. MEETING GUIDELINES AND LIMITATIONS:

EPA projects that none of the individual meetings identified in these tasks will exceed a total cost of \$20,000. The contractor shall immediately notify the EPA Contracting Officer, PO and TOCOR of any anticipated individual event involving support for a meeting or training that may potentially incur \$20,000 or more in cost during performance. Meeting expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for meeting preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

J. QUALITY ASSURANCE SURVEILLANCE PLAN: Per contract requirements.

K. REFERENCES:

Links to background documents relevant to this Task Order:

December 2010 Chesapeake Bay TMDL:

<http://www.epa.gov/chesapeakebaytmdl>

Chesapeake Bay Program Partnership Approved BMPs:

https://www.chesapeakebay.net/who/group/bmp_expert_panels

Chesapeake Bay Program Partnership BMP Protocols and Procedures:

https://www.chesapeakebay.net/who/group/bmp_expert_panels

Chesapeake Bay Program Partnership BMP Panels Documentation:

https://www.chesapeakebay.net/who/group/bmp_expert_panels

Chesapeake Bay Program Partnership BMP Verification:

http://www.chesapeakebay.net/groups/group/best_management_practices_bmp_verification_committee

Chesapeake Bay Program Partnership's Modeling Tools:

http://www.chesapeakebay.net/groups/group/modeling_team

Chesapeake Bay Program Partnership's Chesapeake Progress Website:

<http://www.chesapeakeprogress.com/>

Chesapeake Bay Jurisdictions' Watershed Implementation Plans

<http://www.chesapeakebay.net/about/programs/watershed>

L. GOVERNMENT FURNISHED INFORMATION/TOOLS:

The following tools will be provided by the TOCOR to the contractor after the contract has been awarded:

- Chesapeake Bay Scenario Builder
- Chesapeake Assessment and Scenario Tool
- Phase 6 Chesapeake Bay Watershed Model
- Chesapeake Progress

1552.217-71 OPTION TO EXTEND THE TERM OF THE CONTRACT-COST-TYPE CONTRACT (APR 1984)

The Government has the option to extend the term of this contract for four (4) additional period(s). If more than 60 days remain in the contract period of performance, the Government, without prior written notification, may exercise this option by issuing a contract modification. To exercise this option within the last 60 days of the period of performance, the Government must provide to the Contractor written notification prior to that last 60-days of the period. This preliminary notification does not commit the Government to exercising the option. Use of an option will result in the following contract modifications:

(a) The "Period of Performance" clause will be amended to cover a base period and option periods:

	Period Start Date	End Date
Base Period	04/01/2018	03/31/2019
Option Period 1	04/01/2019	03/31/2020
Option Period 2	04/01/2020	03/31/2021
Option Period 3	04/01/2021	03/31/2022
Option Period 4	04/01/2022	08/03/2022

(b) Paragraph (a) of the "Level of Effort" clause will be amended to reflect a new and separate level of effort of:

Period	Level of Effort
Base Period	8961
Option Period 1	9858
Option Period 2	10,844
Option Period 3	11,929
Option Period 4	4101

(c) The "Estimated Cost and Fixed Fee" clause will be amended to reflect increased estimated costs and fixed fee for each option period as follows:

Period	Estimated Cost	Fixed Fee	Total CPFF
Option Period 1	TBD	TBD	TBD
Option Period 2	TBD	TBD	TBD
Option Period 3	TBD	TBD	TBD
Option Period 4	TBD	TBD	TBD

(d) If the contract contains "not to exceed amounts" for elements of other direct costs (ODC), those amounts will be increased as follows: N/A

LOCAL CLAUSES EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of **\$TBD** is allotted to cover estimated cost. Funding in the amount of **\$TBD** is provided to cover the corresponding increment of base fee. The amount allotted for costs is estimated to cover the contractor's performance through **TBD**

(b) When the contract is fully funded (i.e. the sum of the total estimated cost, base fee, award fee pool available for award, and award fee awarded, as set forth in the schedule of this contract), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

LOCAL CLAUSES EPA-B-16-102 ESTIMATED COST AND FIXED FEE

- (a) The estimated cost of this contract is **\$TBD**
- (b) The fixed fee is **\$TBD**
- (c) The total estimated cost and fixed fee is **\$TBD**

LOCAL CLAUSE EPA-G-42-101 CONTRACT ADMINISTRATION REPRESENTATIVES

Task Order Contracting Officers Representatives (CORs)/Project Officers for this contract are as follows:

Task Order COR (TOCOR): Rebecca Hindin, hindin.rebecca@epa.gov

Alternate Task Order COR (Alt TOCOR): Emily Trentacoste, trentacoste.emily@epa.gov

Contracting Officials responsible for administering this contract are as follows:

Katie Rechenberg, US EPA. Cincinnati Procurement Operations Division, NWD-001, Cincinnati, Ohio 45268

COST PROPOSAL INSTRUCTIONS
TASK ORDER SOLICITATION
PR-R3-17-00083

The following paragraphs supplement the instructions set forth in the contract clause B-1 "Ordering Procedures". These instructions apply to the prime contractor as well as subcontractors and consultants. It is the prime contractor's responsibility to ensure that all instructions are disseminated to subcontractors and consultants.

Contractors shall submit a summary page for the base and any optional periods. The summary sheet shall be supplemented as necessary to provide thoroughness and clarity in the data presented. Pricing detail shall be included by task for the base and any optional periods. The cost breakdown supporting the above documents shall breakout the following elements: Direct Labor, including direct labor rate and hours for each proposed individual, Fringe Benefits, Overhead, ODC, Travel, Consultants, Subcontractors, Total Subcontract, Subtotal, G&A, Total Cost, Fee, Total Cost Plus Fee. This cost detail shall be broken out for the base and any optional periods, at the task level. A copy of the cost proposal shall be included in the submission in MS Excel. This copy shall include formulas used to arrive at the CPFF for the base and any optional periods.

The estimated LOE is provided in the Section H clause attached to the Task Order Solicitation.

When subcontract effort is included in the cost proposal, the prime contractor shall submit charts for each contract year and for the aggregate (all years, all hours) which clearly indicate the exact allocation of the specified level of effort among the prime contractor and the proposed subcontractors. Specified labor categories as well as job titles within the labor categories should be identified. Subcontractor detail may be provided by the subcontractor directly to the EPA.

If a proposed subcontractor does not have an approved accounting system (one that is considered adequate for use on Government cost-type contracts), the Contracting Officer's consent for a cost type (CPFF, etc.) subcontract will not be granted.

In the cost proposal, the contractor must certify that all proposed personnel (including proposed subcontractor personnel or consultants) for the Professional Level identified by the contractor meet the qualifications specified in the TSAWP IDIQ Contract Attachment 3, "Definition of Labor Classifications."

TASK ORDER SOLICITATION TECHNICAL EVALUATION

TITLE: Chesapeake Bay TMDL Watershed Implementation Plan and Modeling Support

EVALUATION CRITERIA: Contractors shall limit their responses to 10 pages or less, using their discretion on which criteria to place emphasis. Proposals will be evaluated on the criteria listed below by the project Technical Evaluation Team and will be assigned a score from 0-3 using the scale listed below. Award will be based on Best Value Analysis where Technical Quality is more important than Cost/Price.

RATING SCALE

The following rating scale will be used in scoring proposals:

Unacceptable = 0. Criteria are not addressed.

Poor = 1. The proposal fails to adequately address critical requirements of the Performance Work Statement (PWS) and technical evaluation criteria; may satisfy some requirements, but not others; reflects major weaknesses or deficiencies. Could not meet requirements without fundamental changes involving a total re-write or redirection of the offer.

Satisfactory = 2. Proposal addresses and meets most requirements of the PWS and technical evaluation criteria, with some correctable and minor weaknesses and/or deficiencies noted. Is generally considered to demonstrate at least minimum requisite experience, qualifications and performance capabilities. Some discussions may be required to address and correct weaknesses or deficiencies.

Superior = 3. The proposal clearly addresses and exceeds requirements of the Statement of Work (SOW) and technical evaluation criteria with no weaknesses or deficiencies, or very minor, correctable weaknesses or deficiencies noted.

Each point is worth 1/3 of the weight assigned to an individual criterion.

The following criteria and weights will be used in the technical evaluation of Task Order proposals:

CRITERIA

Corporate Technical Experience: (80 Points)

I. Chesapeake Bay Program and Chesapeake Bay TMDL Experience (30 Points)

This criterion evaluates demonstrated corporate experience in fulfilling the technical requirements of contracts/subcontracts/projects similar in technical scope and complexity to this solicitation. Of particular interest is the contractor's technical experience

conducting work under PWS Tasks 2-6. In documenting corporate technical experience, please address the level of corporate understanding of, involvement, and past work experiences with the Chesapeake Bay Program (CBP) Partnership; the CBP management structure; the December 29, 2010, Chesapeake Bay TMDL; the CBP Partnership's BMP protocol and procedures; the President's Executive Order 13508; and the CBP Partnership's draft BMP verification framework. Provide specific examples which illustrate a detailed working knowledge and understanding of the Partnership and its mission related to the tasks within the PWS.

In describing corporate experience, include: (a) a description of the contract/task order/project, (b) the sponsor, (c) the dates of performance, (d) the specific role the contractor assumed in the overall performance (e.g., prime, subcontractor or consultant), (e) relevance of the experience to the requirements in the PWS of this Task Order, and any other information that would serve to establish the contractor's demonstrated corporate technical experience in fulfilling the technical requirements of contracts similar in technical scope to this task order. Report only those projects completed within the past five years, and projects that are ongoing.

II. Chesapeake Bay Modeling and Data Support Tool Applied Experience (20 Points)

This criterion evaluates demonstrated corporate experience in fulfilling the technical requirements of contracts/subcontracts/projects similar in technical scope and complexity to this solicitation. Of particular interest is the contractor's technical experience conducting work under PWS Tasks 3-6. In documenting corporate technical experience, please address the level of corporate understanding of and past work experiences with the CBP Partnership's array of environmental model and other decision support tools, specifically, the Chesapeake Bay Watershed Model (Phase 6), Chesapeake Bay Scenario Builder, Chesapeake Assessment and Scenario Tool (CAST), Bay Facility Assessment Scenario Tool (BayFAST), and supporting infrastructure. Provide examples which illustrate a detailed working knowledge and understanding of these models and other decision support tools, their management applications, and the underlying computer programming.

In describing corporate experience, include: (a) a description of the contract/task order/project, (b) the sponsor, (c) the dates of performance, (d) the specific role the contractor assumed in the overall performance (e.g., prime, subcontractor or consultant), (e) relevance of the experience to the requirements in the PWS of this Task Order, and any other information that would serve to establish the contractor's demonstrated corporate technical experience in fulfilling the technical requirements of contracts similar in technical scope to this task order. Report only those projects completed within the past five years, and projects that are ongoing.

III. Chesapeake Bay Jurisdictions' Watershed Implementation Plan Experience (30 Points)

This criterion evaluates demonstrated corporate experience in fulfilling the technical requirements of contracts/subcontracts/projects similar in technical scope and complexity

to this solicitation. Of particular interest is the contractor's technical experience conducting work under PWS Task 4. In documenting corporate technical experience, please address the level of corporate understanding of and past work experiences with the seven watershed jurisdictions' Phase I and Phase II watershed implementation plans (WIPs), their development, their ongoing and future planned implementation, and their development and tracking of two-year milestones. Provide specific examples which illustrate a detailed working knowledge and understanding of each of the seven jurisdictions and how they are carrying out their commitments under their respective WIPs related to PWS Task 4.

In describing corporate experience, include: (a) a description of the contract/task order/project, (b) the sponsor, (c) the dates of performance, (d) the specific role the contractor assumed in the overall performance (e.g., prime, subcontractor or consultant), (e) relevance of the experience to the requirements in the PWS of this Task Order, and any other information that would serve to establish the contractor's demonstrated corporate technical experience in fulfilling the technical requirements of contracts similar in technical scope to this task order. Report only those projects completed within the past five years, and projects that are ongoing.

Technical Approach: Engaging Partners, Stakeholders and Recognized Experts (20 Points)

This criterion will evaluate the contractor's technical approach for the development and performance in PWS Tasks 2-6. In documenting the technical approach, please address plans on how to effectively engage the wide variety and diversity of involved CBP partner, stakeholders, and recognized outside experts in carrying out each task. Provide examples of how effective the recommended approaches have proven in the past technical work of similar complexity as described in PWS Tasks 2-6. The contractor shall demonstrate an understanding of the work to be performed, and demonstrate the appropriate knowledge of PWS Tasks 2-6, capability (availability of appropriate staff, equipment, and resources), and ability to complete the tasks on time. Demonstrated understanding of the typical problems encountered in performing services required by the PWS and the ability to present practical, efficient solutions for those problems. The contractor's proposal shall include a clear, concise narrative that addresses each of the areas identified under the criteria.